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THE EFFICIENCY OF THE MINNESOTA TEACHER ATTITUDE INVENTORY
FOR PREDICTING INTERPERSONAL RELATIONS IN A NAVAL SCHOOL

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INTRODUCTION

The purpose of this study is to test the efficiency of a measuring instrument to predict the ability of a military instructor to effect harmonious interpersonal relations in the classroom. In recent years psychologists have begun to focus their attention upon interpersonal relationships in the classroom as well as in other situations.

In 1939 Lewin (23) and his associates studied interpersonal relationships within boys' clubs and showed quite clearly that leader-initiated interpersonal relationships affect the resulting behavior of the members of a group.

In 1946 Anderson (2) and his associates conducted a series of experiments in order to determine the effects of teachers' behavior in teacher-pupil relationships. They found that both dominative and socially integrative behavior were "circular" in effect. Aggression was met with aggression and socially integrative behavior elicited more socially integrative behavior in both pupil-pupil relations and teacher-pupil relations.

Independent of these studies, Leeds (18) developed an attitude inventory designed to predict the social-emotional climate that a teacher would create in the classroom. This study was based upon the assumption that a teacher's attitudes toward his pupils would be an index to the degree of rapport which he would have with them. The MTAI was constructed by means of an empirical item analysis. Items were selected on the basis of their ability to discriminate between two groups of teachers; one group characterized as maintaining good relations with pupils, the other as maintaining poor relations. In establishing the validity of the inventory, as a whole Leeds administered the MTAI to a new sample of 100 public school teachers at the 4th, 5th, and 6th grade levels, obtained ratings on these teachers with reference to their relationships with pupils, and correlated the teachers' scores on the MTAI with the ratings. These ratings were obtained from each of three sources: (a) an evaluation of the teacher's relationships with his pupils by the principal under whose supervision that teacher was working, (b) an evaluation of the same relationship by an observer, and (c) an evaluation of the teacher-pupil relationships by the pupils by means of a 50-item questionnaire. Intercorrelations between the predictor (MTAI) and the criteria appear in Table 1.

TABLE 1

Intercorrelation of the Predictor (MTAI) and the various criteria*

	Pupils' ratings	Principals' ratings	MTAI
(1) Observer's rating	.33	.48	.49
(2) Pupils' ratings		.39	.45
(3) Principals' ratings			.43
(4) Composite of 1,2,3			.59

*The obtained r's are all statistically significant at the 1 per cent level of confidence.

In 1951 Leeds (20) conducted a second validity study of the MTAI using as subjects 100 public school teachers at the 4th, 5th, and 6th grade levels. This study followed the same plan

TABLE 2

Intercorrelation of the Predictor (MTAI) and the various criteria*

	Pupils' ratings	Principals' ratings	MTAI
(1) Observer's rating	.22	.43	.51
(2) Pupils' ratings		.39	.31
(3) Principals' ratings			.46
(4) Composite of 1,2,3			.59

*The obtained r's are all statistically significant at the 1 per cent level of confidence.

The Minnesota Teacher Attitude Inventory (MTAI) was the result of this and subsequent research (5, 18, 19, 20, 21, 22).

and procedure as that followed in the 1946 validity study (18). Intercorrelations between the predictor (MTAI) and the various criteria for the 1951 validity study appear in Table 2.

There is a striking similarity between the results of the 1946 and 1951 validity studies. The correlation between the predictor (MTAI) and the composite criterion is identical in the two studies.

In 1952 Callis (5) conducted a third validity study of the MTAI. The sample consisted of 77 public school teachers from central Missouri. Grades four through ten in four school systems were represented. This study followed essentially the same plan and procedure as that followed in the 1946 and 1951 studies (18,20). The only exceptions were: (a) teachers serving as subjects were selected from a wider range of grades (4 thru 10 rather than 4 thru 6), and (b) ratings were made by two observers rather than one. Pupil, principal, and observer rating scales were the same as those used in the 1946 and 1951 studies. Intercorrelations between the predictor (MTAI) and the various criteria for the 1952 study appear in Table 3.

TABLE 3
Intercorrelation of the Predictor (MTAI) and the various criteria

	Students' Ratings	Principals' Ratings	MTAI
(1) Observers' Mean Ratings ¹	.29**	.12	.40**
(2) Students' Ratings		.46**	.49**
(3) Principals' Ratings (deviation scores)			.19
(4) Composite of 1,2,3			.46**
(5) Composite of 1,2			.50**

¹ The correlation between the ratings of the two observers was .33

**Significantly greater than zero at the 1 per cent level of confidence.

Thus it appears that with the MTAI we can predict the nature of teacher-student relations in the classroom about as well as we can predict academic achievement by means of intelligence tests. This relationship between teacher attitudes and teacher-student rapport has been demonstrated at only the elementary school and junior high school levels. It has not, as yet, been demonstrated that the MTAI is a valid predictor of teacher-student relations in adult-level classes. It is the purpose of this study to determine whether or not such a relationship exists.

PROCEDURE

The study was conducted in the Airman School (Class F) of the Naval Air Technical Training Center in Jacksonville, Florida. Before the investigation was begun the Training Center was visited by the investigators, and the purpose and plan of the study were explained in detail to the Training Officer and Assistant Training Officer of the school, and their cooperation was assured. The data were collected over a period of approximately two months during which time one of the investigators remained at the Training Center.

Before the classrooms were visited, the supervisors were called together and the purpose and plan of the study were explained to them. The instructors were informed of the general nature of the study by means of a memorandum from the Training Officer of the school.

The Predictor. The MTAI was selected as the predictor for this study since it attempts to measure the kinds of attitudes which are relevant to teacher-student relations. The MTAI is composed of 150 attitude statements to which the teacher responds with one of five possible responses. The scoring system was determined by purely empirical means (19). The MTAI was administered to a group of teachers judged to be superior in their relations with students and to another group judged to be inferior in their relations with students. The per cent of each group choosing the various response categories was computed and the significance of the difference between these percentages was determined. A significant difference in percentage favoring the superior

group was scored "+1"; a significant difference favoring the inferior group was scored "-1"; all nonsignificant differences were scored "0". Following is an example:

Item: Most children are obedient.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Superior group	34%	58%	4%	3%	1%
Inferior group	18%	64%	4%	13%	1%
Difference in %	+16	- 6	0	-10	0
Scoring	+ 1	- 1	0	- 1	0

It might be argued, on logical grounds, that the "uncertain" and "strongly disagree" response categories should be scored "-1". However, in the past logical face validity for determining scoring systems has been found to be such a notoriously poor predictor of psychological functions, that the authors of the MTAI decided to use a scoring system based on empirical data only.

Two forms of the MTAI were administered to all instructors serving as subjects in the present study; the original form (Form A) and an experimental form (Form BX). These will hereafter be referred to as MTAI(A) and MTAI(BX) respectively. MTAI(BX) is different from MTAI(A) in only minor respects; the difference being a slight modification in terminology. For example; the words "child" or "pupil" as they are used in MTAI(A) were changed to "student" in MTAI(BX). It was felt that instructors working with adult students might respond differently to the two types of items; however, the rather high correlation that was obtained between the two forms of the test (.91) seems to indicate that the change in terminology made little, if any, difference.

In addition to the two forms of the MTAI, the Minnesota Multiphasic Personality Inventory (MMPI) was administered to all instructors participating in the study. A previous study by Chappell (6) has shown that small but significant relationships exist between composite criterion measures of teacher-student rapport and certain scales on the MMPI. It was felt that if similar relationships could be found in subsequent studies, we might be able to relate the ability to effect harmonious teacher-student relations to other more clearly defined personality characteristics.

The Criterion. The criterion consisted of three independent evaluations of each instructor's ability to create and maintain harmonious interpersonal relations in the classroom. These were the same criteria used in the three previous validity studies of the MTAI. The rating scales used by the pupils, principals, and observers in the previous studies were modified and lengthened to make them more appropriate for an adult population.

The first evaluation was made by the students in the instructor's class. This was obtained through a 65 item questionnaire (see Appendix A) which was administered to all students in the instructor's class. The questionnaire was administered by the investigator, and the instructor was not present during this time. The students were told that no one but the investigator would ever know their answers to the individual questions, and they were asked not to place their names on the questionnaire.

The average class consisted of approximately 20 students, and in each case the students had received approximately 20 hours of instruction from the instructor they were evaluating. The questionnaire was scored "rights minus wrongs." The possible range in scores was + 65 to - 65. Therefore, a score of zero indicates that the student made as many negative criticisms of the instructor as he made positive statements about him. The mean score on the questionnaire for each class was obtained, and this score constituted the students' evaluation of interpersonal relations in that particular classroom.

The second evaluation of instructor-student relationships was made by the instructor's supervisor. The supervisor made his evaluation in the form of a 10 item rating scale (see Appendix B). Each item was scored on a 7 point scale, thus yielding a possible range in scores of 10 through 70. There were four supervisors and each rated approximately 20 instructors.

When the ratings were inspected, it was found that one of the four supervisors gave a mean rating that was considerably higher than that given by the other three. Since mean student ratings and observer ratings were roughly equivalent for all four groups, it was assumed that the higher ratings given by the one supervisor were due to his leniency rather than any superiority of his group of instructors over the other three groups. Consequently, supervisors' ratings were expressed as deviations from the mean of the particular rater. That is, all the ratings which each supervisor made were averaged and each instructor's score was expressed as a deviation from that mean. In this way we equated the four groups of instructors with respect to supervisor ratings.

The third estimate of instructor-student relations was made by the investigator who observed each class in process for one class period of approximately 50 minutes. The investigator made his evaluation in the form of a 7 item rating scale (see Appendix C). Each item was scored on a 7 point scale, thus yielding a possible range in scores of 7 through 49.

Each of the three above criteria--mean student ratings, supervisor's ratings (deviation scores), and observer's ratings--were converted to standard scores and summed. The sums of the three criteria scores constitute the composite criterion.

The Sample. The sample for this study consisted of 82 instructors in the Airman School (Class P) of the Naval Air Technical Training Center at Jacksonville, Florida. 76 of these instructors were noncommissioned officers in the Navy or Marine Corps and 6 were PFC's in the Marine Corps. Of the 82 instructors 38 were Chief Petty Officers or M/Sergeants, 18 were first class Petty Officers or T/Sergeants, 10 were second class Petty Officers or S/Sergeants, 5 were third class Petty Officers or Sergeants, 5 were Corporals, and 6 were PFC's. Their ages ranged from 20.3 to 37.7 years (Mean = 29.4, SD = 5.0). 65 were married and 17 were not. Their number of years of education ranged from 8 to 15 (Mean = 12.0, SD = 1.1). Number of years since first enlistment ranged from 1.1 to 21.3 years (Mean = 9.7, SD = 5.1). For the 30 Navy instructors GCT scores ranged from 51 to 74 (Mean = 63.3, SD = 5.5). For the 52 Marine Corps instructors GCT scores ranged from 101 to 150 (Mean = 118.3, SD = 9.8). The Navy uses a test with a population mean of 50 and a Standard Deviation of 10. The Marine Corps uses a test with a population mean of 100 and a Standard Deviation of 20. If the two tests are considered to be equivalent and each Navy GCT is multiplied by two we have for the total group a range in GCT scores of 100 to 150 (Mean = 121.3, SD = 10.9).

Of the 82 instructors 21 taught mathematics, 17 taught physics, 23 taught layout (mechanical drawing), and 21 taught aircraft familiarization.

Forms A and BX of the MTAI were administered to each of the instructors participating in the study. The Minnesota Multiphasic Personality Inventory (MMPI) was also administered to each of the instructors.

RESULTS

Summary statistics and intercorrelations of the predictor (MTAI), the various criteria, and 23 scales of the MMPI are presented in Table 4. The 29 variables listed in Table 4 are as follows:

A. Criteria

- | | |
|--------------------------|---------------------------------|
| 1. Observer Rating | (Standard score) |
| 2. Mean Students' Rating | (Standard score) |
| 3. Supervisor's Rating | (Deviation score) |
| 4. Composite of 1, 2, 3 | (Sum of the 3 criterion scores) |

TABLE 4

INTERCORRELATIONS OF VARIABLES*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Mean	SD	
1. Obs. Rating	27	19	67	11	09	-01	06	-09	-05	-22	-05	04	07	-14	-01	-13	17	10	05	-13	-06	-05	03	50.1	10.0							
2. Sup. s. Rating		38	77	-05	11	-01	05	-08	08	-11	05	-05	03	-15	07	04	-09	15	20	11	-22	-12	-08	06	50.2	9.3						
3. Sep. s. Rating			71	18	12	01	06	-23	00	12	07	-15	-05	04	11	-16	-13	-07	-19	10	02	24	14	04	-07	-21	-02	07	50.0	9.7		
4. Comp. Rating				11	09	-08	13	-19	01	-01	09	00	-20	-12	-06	00	-10	-02	-17	-06	00	05	23	18	01	-17	-18	-08	07	150.1	21.1	
5. MTA (A)					91	09	-13	-08	08	13	00	-08	32	07	20	01	-02	01	-15	-12	04	-01	09	-02	61	-11	11	25	69.9	31.9		
6. MTA (BX)						91	-11	-03	08	20	18	01	-03	24	13	21	08	-09	02	-19	-13	05	-01	11	08	-05	-08	12	22	90.4	31.2	
7. L							41	-23	09	09	17	17	04	-27	-10	-06	-05	-23	-06	-32	-20	07	40	08	23	-27	-13	-40	-09	3.4	1.9	
8. K								-36	24	-02	42	32	-46	11	18	32	-20	-38	-69	-69	-69	45	48	41	27	-67	-65	-24	05	15.3	4.4	
9. F									20	27	-04	25	31	25	21	49	28	41	55	-19	-10	-46	-45	-03	47	34	27	-11	3.7	2.9		
10. Hs											43	66	11	09	31	56	46	-20	19	-18	-16	08	06	-11	22	22	-07	-06	-23	12.2	3.7	
11. I												32	15	20	23	66	26	-24	38	-10	03	08	-03	-34	21	28	-06	-28	-24	16.3	3.5	
12. Hy													15	02	28	42	33	-23	-12	-48	-28	28	28	12	29	-11	-38	-21	-06	19.6	3.7	
13. Pa														-08	40	26	43	28	-13	01	-15	09	-17	04	14	-14	-05	26	07	22.4	4.6	
14. Mf															14	21	07	00	39	17	31	-18	-13	-14	-21	45	29	06	03	22.9	4.8	
15. Pa																51	01	-09	05	-11	01	10	-14	-09	23	05	-16	-01	-09	8.6	2.8	
16. Pt																	57	-06	32	-20	01	07	-15	-24	16	29	-08	-05	-20	32.6	3.6	
17. Sc																		17	10	03	-22	12	-11	-09	26	08	12	13	13	23.7	8.1	
18. Me																				52	18	-18	-37	-09	-08	15	43	57	34	21.0	4.1	
19. S																				25	34	-25	-11	-35	-15	49	28	-07	-43	21.2	7.6	
20. Hs																					57	-44	-56	-33	-22	52	82	42	04	19.1	7.0	
21. Fv																															14.4	5.1
22. TE																															23.4	3.4
23. Re																															20.5	3.8
24. Do																															16.7	4.8
25. LEP																															10.3	3.2
26. Pf																															6.4	4.2
27. Pt																															10.0	4.1
28. AR																															10.2	2.9
29. SI																															23.2	2.9

* Decimal points have been omitted.

† r of .22 required to be significant at the 5 percent level of confidence.

‡ r of .28 required to be significant at the 1 percent level of confidence.

B. Predictor

5. MTAI(A) (Raw Score + 100)

6. MTAI(BX) (Raw Score + 100)

C. MMPI validity scales

7. L (Raw Score)

8. K (Raw Score)

9. F (Raw Score)

D. MMPI clinical scales

10. Hypochondriasis (Raw Score + K correction)

11. Depression (Raw Score)

12. Hysteria (Raw Score)

13. Psychopathic Deviate (Raw Score + K correction)

14. Masculinity-femininity (Raw Score)

15. Paranoia (Raw Score)

16. Psychasthenia (Raw Score + K correction)

17. Schizophrenia (Raw Score + K correction)

18. Hypomania (Raw Score + K correction)

E. Additional MMPI scales

19. Social Introversion (Raw Score) (9,10,13)*

20. Hostility (Raw Score) (8)

21. Pharisae-Virtue (Raw Score) (8)

22. Teacher-Effectiveness (Raw Score) (6)

23. Responsibility (Raw Score) (16)

24. Dominance (Raw Score) (15)

25. Low back pain (Raw Score) (17)

26. Parieto-frontal (Raw Score) (1,11)

27. Prejudice (Raw Score) (14)

28. A.W.O.L. recidivism (Raw Score) (7)

29. Socio-economic status (Raw Score) (12)

*Numbers in parenthesis refer to items in the bibliography.

The correlation coefficients appearing in columns 5 and 6 of Table 4 show that, for this group, we are unable to predict our criterion by means of the MTAI.

The intercorrelations among the three independent criteria are quite low with the exception of the correlation of .38 between supervisor and student ratings. The intercorrelations among the criteria are similar, in certain respects, to those found in the 1952 validity study (see Table 3).

The correlation of .91 between the two forms of the MTAI indicates that, for all practical purposes, the two forms may be considered as equivalents.

Correlations between 23 scales of the MMPI and the criteria as well as the predictor are found in rows 1 through 6 and columns 7 through 29. Only 11 of these 138 correlation coefficients are statistically significant at the 5 percent level of confidence. One of the 11 is significant at the 1 percent level. On the basis of chance one could expect about 7 of 138 correlation coefficients to be significant at the 5 percent level of confidence. However, there is no way of determining from the data which, if any, of the 11 significant correlation coefficients are statistical artifacts. None of the statistically significant correlation coefficients between MMPI scales and criterion measures are sufficiently high to excite more than academic interest. Six of the 7 might have been hypothesized on a priori grounds. The negative relationship (just barely significant at the 5% level) between students' ratings and scores on the parieto-frontal scale of the MMPI is, in all probabilities, a statistical artifact, since the PF scale was designed to differentiate between different types of brain damage.

The significant relationship between MTAI scores and scores on the masculinity-femininity scale of the MMPI provides fertile grounds for theorizing. In attempting to explain why we were unable to predict the criterion by means of the MTAI for this group one member of our research staff* suggested that there may be different ways in which teachers create and maintain rapport with their students; one characterized as a maternal relationship and the other as a paternal relationship. It was further suggested that the MTAI was designed to measure attitudes which are conducive to a maternal relationship but does not measure those attitudes which are conducive to a paternal relationship. On the basis of this hypothesis a relationship between MTAI scores and scores on the masculinity-femininity scale of the MMPI was predicted. A slight but statistically significant relationship between these two variables was subsequently found.

A slight but significant relationship was also found to exist between scores on the MTAI and scores on the socio-economic status scale of the MMPI. This relationship seems to indicate that the MTAI may be more appropriate for those who conceive of themselves as professional educators and less appropriate for those who conceive of themselves as occupying a lower position on the socio-economic continuum. This same idea was expressed in a somewhat different way by a former member of our research staff**. In attempting to explain why we were unable to predict the criterion by means of the MTAI it was suggested that: "The MTAI was designed to predict how well a teacher might be expected to get along with his students. There is a difference between teaching and training, and there may be a difference between the way teachers get along with their students and trainers get along with their trainees. These instructors conceived of themselves as trainers, not teachers." This idea was also expressed before the relationships between MTAI scores and scores on various scales of the MMPI were known.

The foregoing interpretations should not be taken as statements of fact, but merely as hypotheses to be tested by future research.

SUMMARY AND CONCLUSIONS

An investigation was undertaken to test the efficiency of the Minnesota Teacher Attitude Inventory as a predictor of teacher-student relationships in a naval school. A threefold criterion

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of teacher-student rapport was used:

(1) student ratings, (2) supervisor ratings, and (3) observer ratings. It was found that, for the group of instructors under investigation, the Minnesota Teacher Attitude Inventory is not a significant predictor of the criteria, individually or combined.

By noting the relationship between MTAI scores and scores on various scales of the Minnesota Multiphasic Personality Inventory certain hypotheses were advanced concerning the reasons why we were unable to predict the criterion by means of the MTAI for this particular group.

The investigators feel certain that the ability to create and maintain harmonious interpersonal relations is a psychologically meaningful variable. Furthermore, previous studies have shown that the nature of teacher-student relations in a civilian public school can be predicted with a fair degree of accuracy by means of an attitude inventory (MTAI). The results of this study have indicated that those attitudes of the instructor which are measured by the MTAI are not the attitudes most relevant to the creation and maintenance of harmonious interpersonal relations in a naval school. Therefore, it would seem advisable to determine, by empirical means, those attitudes which are related to the creation and maintenance of harmonious interpersonal relations in this type of setting, and after such an attitude scale has been empirically derived it should be validated on a similar group of instructors.

REFERENCES

1. Anderson, A.L. Personality changes following pre-frontal lobotomy. J. consult. Psychol., 1949, 13, 105-107.
2. Anderson, H. H., et al. Studies of teacher's classroom personalities, III. Follow-up studies of the effects of dominative and integrative contacts on children's behavior. Psychol. Monogr., 1946, No. 11.
3. Callis, R. Change in teacher-pupil attitudes related to training and experience. Unpublished doctor's dissertation, University of Minnesota, 1948.
4. Callis, R. Change in teacher-pupil attitudes related to training and experience. J. educ. Psychol. Measmt., 1950, 10, 718-727.
5. Callis, R. The efficiency of the Minnesota Teacher Attitude Inventory for predicting interpersonal relations in the classroom. J. appl. Psychol., 1953, 37, 82-85.
6. Chappell, T. L. The Minnesota Multiphasic Personality Inventory and teacher effectiveness. Unpublished master's thesis, University of Missouri, 1951.
7. Clark J. H. Application of the MMPI in differentiating A.W.O.L. recidivists from non-recidivists. J. Psychol., 1948, 26, 229-234.
8. Cook, W. W. & Medley, D. M. Proposed hostility and pharisaic-virtue scales for the MMPI designed to measure ability to work harmoniously with people. Unpublished manuscript, University of Minnesota.
9. Drake, L. E. A social I.E. scale for the MMPI. J. appl. Psychol., 1946, 39, 51-54.
10. Drake, L. E. & Thiede, W. B. Further validation of the social I.E. scale for the MMPI. J. educ. Res., 1948, 41, 551-556.
11. Friedman, S. H. Psychometric effects of frontal and parietal lobe brain damage. Unpublished doctor's dissertation, University of Minnesota, 1950.
12. Gough, H. G. A new dimension of status: I. Development of a personality scale; II. Relationship of the St scale to other variables; and III. Discrepancies between the St scale and "objective status." Amer. sociol. Rev., 1948, 13, 401-409, 534-537 and 1949, 14, 275-281.
13. Gough, H. G. A research note on the MMPI social I.E. scale. J. educ. Res., 1949, 43, 138-141.
14. Gough, H. G. Personality correlates of social and ethical attitudes among high school students. Unpublished doctor's dissertation, University of Minnesota, 1949.
15. Gough, H. G., McClosky, H. & Meehl, P. E. A personality scale for measuring dominance. J. abnorm. soc. Psychol., 1951, 46, 360-366.
16. Gough, H. G., McClosky, H. & Meehl, P. E. A scale for measuring social responsibility. J. abnorm. soc. Psychol., 1952, 47, 73-80.
17. Hanvik, L. J. Some psychological dimensions of low back pain. Unpublished doctor's dissertation, University of Minnesota, 1949.
18. Leeds, C. H. The construction and differential value of a scale for determining teacher-pupil attitudes. Unpublished doctor's dissertation, University of Minnesota, 1946.
19. Leeds, C. H. A scale for measuring teacher-pupil attitudes and teacher-pupil rapport. Psychol. Monogr., 64, No. 6 (Whole No. 312)
20. Leeds, C. H. A second validity study of the Minnesota Teacher Attitude Inventory. Elem. Sch. J., 1952, 52, 398-405.
21. Leeds, C. H. & Cook, W. W. The construction and differential value of a scale for determining teacher-pupil attitudes. J. exp. Educ., 1947, 16, 149-159.
22. Leeds, C. H., Cook W. W. & Callis, R. Minnesota Teacher Attitude Inventory. New York: Psychological Corporation, 1951.
23. Lewin, K., Lippitt, R. & White, R. K. Patterns of aggressive behavior in experimentally created "social climates." J. soc. Psychol., 1939, 10, 271-276.

APPENDIX A

STUDENT QUESTIONNAIRE

DIRECTIONS: Read each question. When you have decided the statement is either true or false (yes or no), blacken the corresponding space on the answer sheet with a soft pencil. Make your mark as long as the pair of lines, and move the pencil point up and down firmly to make a heavy black line. If you change your mind, erase your first mark completely. The following questions apply only to the instructor of this class. Be sure to write the name of this class and the instructor on the answer sheet.

1. Does this instructor praise you for doing good work?
2. Does he "make fun of" the students a lot?
3. Is he easily upset?
4. Is it easy for this instructor to keep order in the classroom?
5. Does he make the schoolwork interesting?
6. Is he often "bossy"?
7. Is it easy for you to go to this instructor with questions?
8. Does he force his ideas on the students?
9. Is he usually considerate of you?
10. Does this instructor keep his promises?
11. Does he think he is always right and the student is wrong?
12. Does he have "pets" or favorites among the students?
13. Does he often "make fun of" a student in front of others?
14. Is it easy to please this instructor?
15. Does he talk too much?
16. Do the students often want to annoy this instructor?
17. Is he usually fair with the students?
18. Is he always "fussing at" the students?
19. Does he usually pay attention to you when you raise your hand?
20. Do most of the students like this instructor?
21. Does he usually laugh with the students when something funny happens?
22. Is he usually impatient when students ask questions in class?
23. Does he explain what you don't understand?
24. Does this instructor get angry when you don't understand?
25. Is he always willing to help you with your schoolwork?
26. Does he often punish the whole class when only one or two students are to blame?
27. Does he "make fun of" you when you make a mistake?
28. Does he give you a chance to ask questions?

29. Does he often get angry with the students?
30. Are you afraid to ask this instructor for help?
31. Does he punish a student in front of other students?
32. Is he willing to give extra help to the students who need it?
33. Does he seem to understand the student's point of view?
34. Does this instructor take a personal interest in his students?
35. Do you like this instructor?
36. Does he seem to like teaching?
37. Does he go out of his way to discover and discipline misconduct?
38. Does he try to "bust" a student out of school for some minor misconduct?
39. Does he explain the reasons for requirements and regulations?
40. Does he provide helpful hints in doing schoolwork?
41. Does this instructor seem to welcome comments from the students?
42. Is he too critical of students who make mistakes?
43. Is he considerate of the welfare of the class?
44. Is this instructor easily "rattled"?
45. Does he have a good sense of humor?
46. Is he often nervous and tense?
47. Is he conceited and "stuck-up"?
48. Does he let students know what is expected of them?
49. Is he stiff and formal in his relationships with students?
50. Does this instructor encourage students to express their own ideas?
51. Is he cheerful and good natured?
52. Does he encourage students to think for themselves?
53. Do you feel uncomfortable talking to this instructor outside of class?
54. Is he often sarcastic?
55. Does he frequently interrupt students when they are speaking?
56. Does he "have it in" for some students?
57. Does he often lose his temper?
58. Do you enjoy "just talking" with this instructor outside of class?
59. Does he give you too much work to do?
60. Does he often criticize students?
61. Do you have to be "nice" to this instructor in order to get along with him?
62. Do you usually feel comfortable and "at ease" in this instructor's class?
63. Is this instructor able to see things from the student's point of view?
64. Do you respect this instructor?
65. If you were to meet this instructor on the street a year from now would you expect him to remember you?

APPENDIX B

SUPERVISOR'S
RATING SCALE
of
INSTRUCTOR-TRAINEE RELATIONSHIPS

Instructor Rated _____ Supervisor _____

Date _____ Department _____

Directions: Please place a cross (X) on the line opposite the response which most accurately indicates your frank and objective evaluation of the behavior of the instructor being rated. You possibly will find that each phrase in a particular response is not applicable to the instructor being rated. The closest approximation is what is wanted.

1. WHAT IS THE NATURE OF THIS INSTRUCTOR'S RELATIONSHIPS WITH TRAINEES IN THE CLASSROOM?

- _____ a. Responsive; approachable; "warm"; tactful; helpful; interested in trainees' efforts even if those efforts are not particularly effective.
- _____ b. Exhibits many but not all of the characteristics listed above.
- _____ c. Exhibits some of the characteristics listed above.
- _____ d. Average.
- _____ e. Exhibits some of the characteristics listed below.
- _____ f. Exhibits many but not all of the characteristics listed below.
- _____ g. Reserved; aloof; stiff; formal; removed from the group; condescending.

2. WHAT IS THIS INSTRUCTOR'S REACTION TO MISBEHAVIOR OR IGNORANCE?

- _____ a. Impatient; always on the lookout for misconduct; never lets a trainee "get away with" anything; rules with an iron hand; on-the-spot punishment.
- _____ b. Exhibits many but not all of the characteristics listed above.
- _____ c. Exhibits some of the characteristics listed above.
- _____ d. Average.
- _____ e. Exhibits some of the characteristics listed below.
- _____ f. Exhibits many but not all of the characteristics listed below.
- _____ g. Calm; patient; deliberate; never gets excited; handles discipline constructively; tries to get at the underlying cause of misbehavior and do something about it.

3. HOW WOULD YOU DESCRIBE THE GENERAL MORALE OF TRAINEES WHILE IN THE INSTRUCTOR'S CLASS?

- _____ a. Trainees are alert and eager; trainees exhibit a friendly and cooperative "class spirit"; trainees take pride in the accomplishments of the group; trainees enjoy this class a great deal.
- _____ b. Trainees exhibit many but not all of the characteristics listed above.
- _____ c. Trainees exhibit some of the characteristics listed above.
- _____ d. Average.

- _____ e. Trainees exhibit some of the characteristics listed below.
- _____ f. Trainees exhibit many but not all of the characteristics listed below.
- _____ g. Conflict and antagonism are evident; trainees seem to be working at cross purposes; no team spirit; class lacks the "esprit de corps" necessary for effective group work.

4. DOES THIS INSTRUCTOR HAVE A "PERSONNEL" OR "SUBJECT-MATTER" POINT OF VIEW?

- _____ a. Insensitive to any needs of trainees other than intellectual; pays little attention to individual differences in mental ability; thinks in terms of subject-matter mastery only; every trainee must meet same requirements of achievement.
- _____ b. Exhibits many but not all of the characteristics listed above.
- _____ c. Exhibits some of the characteristics listed above.
- _____ d. Average.
- _____ e. Exhibits some of the characteristics listed below.
- _____ f. Exhibits many but not all of the characteristics listed below.
- _____ g. Takes a personal interest in his trainees; sensitive to individual differences in trainees' needs, abilities, and interests; as sensitive to emotional, social, and physical needs of trainees as to their intellectual needs; actually does something to help meet these needs.

5. HOW EFFECTIVE IS THIS INSTRUCTOR IN CREATING A FRIENDLY CLASSROOM ATMOSPHERE?

- _____ a. Conversational; friendly; exhibits a sense of humor; sees trainee's point of view; talks to the trainees rather than at them.
- _____ b. Exhibits many but not all of the characteristics listed above.
- _____ c. Exhibits some of the characteristics listed above.
- _____ d. Average.
- _____ e. Exhibits some of the characteristics listed below.
- _____ f. Exhibits many but not all of the characteristics listed below.
- _____ g. Critical; faultfinding; harsh; unfriendly.

6. HOW EFFECTIVE IS THIS INSTRUCTOR IN ESTABLISHING A FEELING OF SECURITY?

- _____ a. Excitable; impatient; erratic; intolerant of mistakes; demanding; lacks appreciation of trainees efforts; overlooks opportunities for "bringing out" weaker trainees.
- _____ b. Exhibits many but not all of the characteristics listed above.
- _____ c. Exhibits some of the characteristics listed above.
- _____ d. Average.
- _____ e. Exhibits some of the characteristics listed below.
- _____ f. Exhibits many but not all of the characteristics listed below.
- _____ g. Encouraging; constructive; inspiring; stimulates confidence; polite; steady; poised; predictable; interested in trainees as persons; tells trainees what is expected of them.

7. HOW WELL ADJUSTED IS THIS INSTRUCTOR IN HIS OWN PERSONALITY?

- ☐ a. Exceptionally well adjusted; emotionally well poised regardless of situation; thinks and acts objectively; usually forgets self and own interests and attends well to the group.
- ☐ b. Exhibits many but not all of the characteristics listed above.
- ☐ c. Exhibits some of the characteristics listed above.
- ☐ d. Average.
- ☐ e. Exhibits some of the characteristics listed below.
- ☐ f. Exhibits many but not all of the characteristics listed below.
- ☐ g. Noticeably maladjusted; behavior often characterized by emotional displays, nervous mannerisms, inferiority feelings, periods of moodiness; domineering attitude, whimpering attitude, etc.

8. IS THIS INSTRUCTOR CONSIDERATE OR HARSH IN HIS RELATIONSHIPS WITH TRAINEES?

- ☐ a. Harsh; hypercritical; faultfinding; sarcastic; cross; threatening; allows trainees to laugh at the mistakes of others.
- ☐ b. Exhibits many but not all of the characteristics listed above.
- ☐ c. Exhibits some of the characteristics listed above.
- ☐ d. Average.
- ☐ e. Exhibits some of the characteristics listed below.
- ☐ f. Exhibits many but not all of the characteristics listed below.
- ☐ g. Kind; considerate; courteous; friendly; complimentary; tactful; fair.

9. WHAT IS THE ATTITUDE OF THE TRAINEES TOWARD THIS INSTRUCTOR?

- ☐ a. Trainees regard him as one of the most popular instructors; trainees consider him a real friend to whom they can go; trainees enjoy talking to this instructor outside of class.
- ☐ b. Exhibits many but not all of the characteristics listed above.
- ☐ c. Exhibits some of the characteristics listed above.
- ☐ d. Average.
- ☐ e. Exhibits some of the characteristics listed below.
- ☐ f. Exhibits many but not all of the characteristics listed below.
- ☐ g. Trainees don't like the instructor; trainees are afraid of the instructor and tend to avoid him; trainees do not feel free to associate with this instructor outside of class.

10. WHAT IS THE NATURE OF THIS INSTRUCTOR'S ATTITUDE TOWARD TRAINEES?

- ☐ a. Trainees "should be seen and not heard"; regards young people as inferior to adults; trainees are naturally stubborn and lazy; often ill at ease in presence of trainees.
- ☐ b. Exhibits many but not all of the characteristics listed above.
- ☐ c. Exhibits some of the characteristics listed above.

- _____ d. Average.
- _____ e. Exhibits some of the characteristics listed below.
- _____ f. Exhibits many but not all of the characteristics listed below.
- _____ g. Accepts trainees for what they are; friendly, sympathetic approach; likes trainees; enjoys having them around; sees trainee's point of view.

APPENDIX C

OBSERVER'S
RATING SCALE OF INSTRUCTOR-TRAINEE RELATIONSHIPS

Instructor _____ Department _____

Day, date & time _____

1. Responsive-Reserved. (Accepting, approachable, "warm", tactful, helpful, interested in trainees efforts even if not effective) vs. (Rejecting, aloof, stiff, formal, removed from the group, condescending)

1 2 3 4 5 6 7

2. Tolerance for misbehavior or ignorance. (Patient, permissive, readiness of explanation, calm, deliberate, never gets excited, tries to get at underlying cause of misbehavior & do something about it) vs (Always on lookout for misbehavior, never lets trainee "get away with" anything, rules with an iron hand, on-the-spot punishment)

1 2 3 4 5 6 7

3. Morale of the class. (Relaxed, alert, eager, friendly & cooperative "class spirit", pride in accomplishments of the group, trainees enjoy this class) vs (Tense, conflict, antagonism, trainees working at cross purposes, no team spirit, no "esprit de corps" necessary for effective group work)

1 2 3 4 5 6 7

4. Personnel or Subject-Matter point of view. (Individual oriented, personal interest in trainees, sensitive to ind. diffs.) vs (Insensitive to needs other than intellectual, pays little attention to ind. diffs. in ability, thinks in terms of subject-matter mastery only, all trainees must meet same requirements of achievement)

1 2 3 4 5 6 7

5. Creating a friendly classroom atmosphere. (Friendly, conversational, sense of humor, sees trainees point of view) vs (Critical, faultfinding, harsh, definitely unfriendly)

1 2 3 4 5 6 7

6. Establishing a feeling of security. (Polite, steady, poised, predictable, encouraging, constructive, inspiring, stimulates confidence, interest in trainees as persons, tells trainees what is expected of them) vs (Intolerant, demanding, impatient; excitable, erratic, inappreciative of trainees' efforts, doesn't "bring out" weaker trainees)

1 2 3 4 5 6 7

7. Considerate or Harsh. (Kind, courteous, friendly, fair, complimentary, tactful, approval) vs (Critical, sarcastic, cross, threatening, faultfinding, disapproval, allows trainees to laugh at mistakes of others)

1 2 3 4 5 6 7